

- 2 -

Amendment to the Specification

1. Please replace paragraph [0004] on page 1-2 of the specification with the following replacement paragraph.

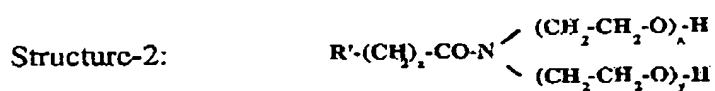
[0004] One embodiment of the invention provides emulsion compositions suitable for use at start-up of a reformer of a fuel cell system comprising hydrocarbon, water and at least one surfactant from each of two types of surfactants. One type of surfactant (Type-A) is selected from the group consisting of alkoxyated alkyl alcohols, alkoxyated alkyl monoesters and alkoxyated alkyl diesters. The other type of surfactant (Type-B) is selected from ethoxyated alkyl ~~amid~~ amide surfactants. In a preferred embodiment, the emulsion composition is a complex water-in-oil-in-water emulsion.

2. Please replace paragraph [0018] on page 7 of the specification with the following replacement paragraph:

[0018] An essential component of the emulsion composition of the instant invention is a surfactant mixture comprising at least one surfactant from each of two types of surfactants. One type of surfactant (Type-A) is selected from the group consisting of alkoxyated alkyl alcohols, alkoxyated alkyl monoesters and alkoxyated alkyl diesters. The other type of surfactant (Type-B) is selected from ethoxyated alkyl ~~amid~~ amide surfactants.

3. Please replace paragraph [0020] on page 8 with the following replacement paragraph:

[0020] Type-B surfactants comprise ethoxyated alkyl ~~amid~~ amide surfactants having the general chemical structure shown below:



- 3 -

Where R' is a methyl group, z is an integer from about 5 to 20, the sum of x and y is from 2 to 50.

4. Please replace paragraph [0021] on pages 8-9 with the following replacement paragraph:

[0021] The term "alkyl" in the alkoxyated alkyl alcohols, alkoxyated alkyl monoesters, alkoxyated alkyl diesters and ethoxyated alkyl ~~amide~~ amide surfactants are meant to represent saturated alkyl hydrocarbons, unsaturated alkyl hydrocarbons or mixtures thereof. Preferably the Type-A and type-B surfactants decompose in the temperature range of 250°C to 700°C. Preferably at about 700°C substantially all of the surfactant is decomposed. The total concentration of Type A plus Type -B surfactants in the emulsion composition is in the range of 0.05 to 1wt%. The ratio of Type-A to Type-B can be in the range of 1:1 to 1:4 i.e., equal amounts of Type-A and Type-B surfactants to four times more Type-B surfactant than Type-A surfactant. The preferred ratio of Type-A to Type-B surfactant is 1:1 to 1:2 and more preferred is 1:1 of Type-A to Type-B surfactants.

5. Please replace Table-1 on page 12 with the following replacement table.

- 4 -

Table -1

<u>Solution</u>	<u>Interfacial tension</u> (dynes/cm)
Naphtha / Water	53.02
Naphtha / Water + 1 wt% alkoxyated alkyl alcohol (structure 1a), n= 17; m=2, M is CH ₂ -CH ₂) added to naphtha	1.51
Naphtha / Water + 1 wt% alkoxyated alkyl esters (structure 1b) , n= 10; m=6, M is CH ₂ -CH ₂) added to water	0.86
Naphtha / Water + 1 wt% ethoxyated alkyl amid <u>amide</u> (structure 2, z = 17; x+y-7) added to naphtha	<0.5

6. Please replace paragraph [0032] on page 14 with the following replacement paragraph:

[0032] 0.6g of polyethylene glycol 600 monolaurate (sold by Henkel Corporation as Emerest 2661 (structure 1b) , n= 10; m=6) and 0.4 g of polyethylene glycol 200 dilaurate (sold by Henkel Corporation as Emerest 2622 (structure 1c), n= 10; m=2) Type-A surfactants were added 61g isooctane (dyed orange) and 39g water (dyed blue) and mixed using a Fisher Hemetology/Chemistry Mixer Model 346. Mixing was

- 5 -

conducted for 5 minutes at 25°C. The mixture was allowed to stand for 30 minutes. A water-in-oil emulsion with excess water splitting out was observed. To this mixture was added 0.5 g of alkyl ethoxylated ~~amid~~ amide (structure-2, $z = 17$; $x+y = 7$); sold as Ethomid C-12 by Azko Nobel Company, Chicago IL, and the mixture mixed again as described above. A milky white emulsion was observed with no phase separation even after 6 hours of standing. Using a Leitz optical microscope the emulsion was characterized as a macro-macro W/O/W emulsion as described in Example-3. The conductivity of water was recorded as 47 micro mho, naphtha as 0.1 micro mho and the emulsion 38 micro mho confirming the water continuity as described in Example-4.